

From "Surcharge for Infiltration and Inflow Payable by the Town of Montague"

I. I & I costs in Turners Falls, Montague City, and Montague Center

A Cost to remove grit contained in I & I

9.50% I & I solids as percent of total solids (calculation below).

13,530 Total cost to remove grit - estimated at FY21 total payments to Waste Management for grit removal

1,286 Est cost to remove grit due to I & I

B Increased electrical costs for increased pumping

163,000 Budgeted Electricity

0.08 Document's estimated % of electricity used for primary screw pump

32.00% I & I as % of total flow (calculation below)

4,173 Electricity x % for pump x I & I %

C Increased amount of chlorine in primary clarifier and chlorine contact tank

32.00% I & I as % of total flow (calculation below)

9,943 Estimated FY22 Chlorine cost for primary clarifier and chlorine contact tank

[FY21 total chlorine purchases = 13,257.6. Estimating 75% used for above purpose per info in document]

3,182 Cost of chlorine for primary clarifier and chlorine contact tank for I & I flow

D Increased labor due to grit handling, equipment maintenance, chlorine handling, and process control modifications

Document says this is estimated at 1 FTE employee. FY22 Budget has 8 FTE, so 1 FTE = 1/8 total labor costs

432,332 5110 Regular Wages

45,000 5132 OT Wages

12,000 5172 Workers Comp

130,000 5174 Health Insurance

92,209 5191 Retirement

711,541

88,943 1/8 total labor costs

II. Increased fee from Erving due to I & I from Millers Falls

37,919,333

Trombley called this MF WWTP flow from Montague, what we're calling

Erving's flow from Millers Falls. (For FY21 used two calendar year avg 2018-2019)

(12,083,075)

Less the Millers Metered Flow-2 year avg of the TFWD metered flow to MF

25,836,258

total I & I from Millers Falls going to Erving

68.13%

as a %, rounded to 6 decimal places

225,500

Assessment to Montague from Erving for treating wastewater from MF, 2.5% increase/yr.

153,644

Cost of treating I & I from Millers Falls by Erving

TOTAL COST TO TOWN TO TREAT I & I IN FY22

251,228

Calculation of I & I as % of total Montague WPCF Flow

299,665,000 2 calendar year average Montague WPCF flow

(203,759,875) Less Montague metered flow (MC = 7,310,000, LP = 3,445,175, TF+Mcity= 193,004,700)

95,905,125 Total I & I coming into Montague WPCF

32.00% I & I as % of total flow

Calculation of I & I solids as % of total solids

1,262,535 Montague WPCF influent solids in pounds/year. This is a 2 year average.

119,977 pounds of solids due to I & I. This uses the I & I flow calculated above, and 150

mg/l as the percentage of solids in the I & I

9.50% I & I solids as percent of total solids. This % will be used in other calculations.